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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/499,962	02/08/2000	Tor C. Anderson	10992204-1	1958

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EXAMINER

QUASH, ANTHONY G

ART UNIT

PAPER NUMBER

2881

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

04

<b>Office Action Summary</b>	<b>Application No.</b> 09/499,962	<b>Applicant(s)</b> ANDERSON ET AL.	
	<b>Examiner</b> Anthony Quash	<b>Art Unit</b> 2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 June 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)          |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date <u>8/23/04</u> .                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____.                                                            | 6) <input type="checkbox"/> Other: _____.                                   |

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 30 is rejected under 35 U.S.C. 102(b) as being anticipated by Umemura [5399865]. As per claim 30, Umemura [5399865] discloses a scientific apparatus for use in high vacuum environments, the apparatus comprising at least one electrical connection therein resulting from a base plate having a groove in at least one face thereof wherein an electrical lead is sequestered in the groove and wherein a shielding plate covers the groove. See Umemura [5399865] fig. 15, col. 15 lines 15-25, col. 6 lines 10-25, 40-45, col. 15 line 49-55.

Claims 1-6,8-17,20-24,26-28, are rejected under 35 U.S.C. 102(e) as being anticipated by Jarrell [6,525,314]. As per claims 1-6,8-24,26-28, Jarrell [6,525,314] discloses an apparatus and method for constructing a mass spectrometer comprising components of an ion optics system for a mass spectrometer, affixing to a mounting base each component of an ion optics system for a mass spectrometer, each of which are affixed to a support either prior to or after said support is affixed to said mounting base, each of the supports having at least one support mating face, wherein the

mounting base comprises a plurality of base mating faces corresponding to a respective support mating face, wherein the support mating faces and the base mating faces are configured and dimensioned such that when the support mating faces are brought together in registration with the respective base mating faces, the components are optically aligned within acceptable tolerances without further adjustment, securing the mounting base to a frame of the mass spectroscopy apparatus. In addition, Jarrell [6,525,314] discloses the alignment being at 90 degrees, at least one of the supports having at least two faces and at least a portion of each of the two faces being aligned with two faces of the base. Jarrell [6,525,314] also discloses a plurality of supports with attached component comprising an ion source and a detector and optionally one or more of a pulser, an ion mirror and an Einzel lens and the alignment resulting in a relationship between the components that are within acceptable tolerances. Jarrell [6,525,314] also goes on to disclose the supports being affixed to the front face of the base and the front face or rear face having at least one groove therein. See Jarrell [6,525,314] abstract, figs. 1-9A, 11A, 15A-15B, col. 1 lines 5-20, 30-35, col. 2 lines 10-30, col. 4 lines 58-67, col. 5 lines 40-67, col. 6 lines 20-67, and col. 7 lines 30-35, and 50-60.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7,19,28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jarrell [6,525,314]. As per claims 7,19,28-30, Jarrell [6,525,314] discloses all aspects of the claims except for explicitly stating the electrical lead being sequestered in the groove and the apparatus further comprising a shielding plate covering the groove. Jarrell [6,525,314] does teach electrical leads being attached to an ion optic device through insulating standoffs. See Jarrell [6,525,314] col. 6 lines 48-67. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the electrical lead be sequestered in the groove and the apparatus further comprise a shielding plate covering the groove in order to prevent the shorting out of equipment and prevent the electrical and magnetic field generated from the electrical leads from interfering with the ions as they are guided from one area to another.

Claims 1-4,10 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Andresen [433]. As per claims 1,10, Andresen [433] teaches a base having a front face a rear face and at least one side face, at least two supports (walls) where in each of the supports has at least one face and wherein each of the supports is affixed to the base by alignment of a portion of at least one face of the base and a portion of at least one face of the support, and wherein at least on of the supports has attached thereto a component of an ion optics system for a mass spectrometer. See Andresen [433] abstract, figs. 1-8,12-13, col. 1 lines 13-55, col. 2 lines 10-20, col. 3 lines 35-65, col. 4 lines 5-30, col. 5 lines 30-68, col. 6 lines 1-25, col. 7 lines 9-25, 50-60, and col. 8 lines 1-10, 59-65. However, Andresen [433] does not explicitly state the supports providing for optical alignment within acceptable tolerances of components of an ion

optics system when mounted thereon. Andresen [433] does however teach that means for adjusting the ion optics. See Andresen [433] col. 3 lines 35-65, col. 5 lines 35-69, and col. 6 lines 1-20. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the supports provide for optical alignment within acceptable tolerances of components of an ion optics system when mounted thereon in order insure proper measurement of the particle or analyte that is being examined by the mass spectrometer. In addition Andresen [433] also teaches that it was known to provide means for adjusting the ion optics due to the shifting of that ion optics that could occur during transport of the mass spectrometer device.

As per claim 2, Andresen [433] teaches the alignment being at 90 degrees. See Andresen [433] figs. 1-2.

As per claim 3, Andresen [433] teaches at least one of the supports having at least two faces and at least a portion of each of the two faces being aligned with two faces of the base. See Andresen [433] figs. 1-2, and col. 3 lines 45-60.

As per claim 4, Andresen [433] teaches the apparatus being a mass spectroscopy apparatus. See Andresen [433] abstract, figs. 1-8, 12-13, col. 1 lines 13-55, col. 2 lines 10-20, col. 3 lines 35-65, col. 4 lines 5-30, col. 5 lines 30-68, col. 6 lines 1-25, col. 7 lines 9-25, 50-60, and col. 8 lines 1-10, 59-65.

Claims 10, 20, 26 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Drew [061]. As per claim 10, Drew [061] teaches a mass spectroscopy apparatus comprising components of an ion optics system for a mass spectrometer affixed to a

mounting base, each of the components being affixed to a support, each of the supports having at least one support mating face, wherein the mounting base comprising a plurality of base mating faces respectively corresponding to a respective support mating face, wherein the support mating faces and the base mating faces are configured and dimensioned such that when the support mating are brought together in registration with the respective base mating faces, the component are optically aligned. See Drew [061] abstract, figs. 1, 2a-6c, 8b-9a, 14, col. 2 lines 45-65, col. 3 lines 15-20, 45-60, col. 5 lines 50-60, col. 6 lines 15-21, col. 8 lines 35-50, col. 12 lines 1-5, column 13, col. 14 lines 30-45, col. 16 lines 30-69, col. 17 lines 1-45, and col. 19 lines 5-30. However, it does not explicitly state that the components are aligned within acceptable tolerances. Drew [061] does teach the components being precisely aligned. See Drew [061] col. 16 lines 25-35. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the components be aligned within acceptable tolerances in order insure accurate measurement of analyte or ion that is of interest.

As per claims 20,26, Drew [061] teaches a method for constructing an apparatus comprising a plurality of components of an ion optical system for a mass spectrometer, the method comprising bringing together a base having a front face and a rear face and at least one side face, and a plurality of supports wherein each of the supports has at least one face and wherein each of the components is attached or is attachable to one of the supports, aligning at least a portion of a face of each of the supports with a corresponding portion of at least one face of the base and securing the portions to one

another wherein the components of the ion optical system for a mass spectrometer are attached to the supports prior to or subsequent to the step and wherein the portions of the faces are configured and dimensioned such that when the portions are secured the components are optically aligned. See Drew [061] abstract, figs. 1, 2a-6c, 8b-9a, 14, col. 2 lines 45-65, col. 3 lines 15-20, 45-60, col. 5 lines 50-60, col. 6 lines 15-21, col. 8 lines 35-50, col. 12 lines 1-5, column 13, col. 14 lines 30-45, col. 16 lines 30-69, col. 17 lines 1-45, and col. 19 lines 5-30. However, it does not explicitly state that the components are aligned within acceptable tolerances. Drew [061] does teach the components being precisely aligned. See Drew [061] col. 16 lines 25-35. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the components be aligned within acceptable tolerances in order to insure accurate measurement of analyte or ion that is of interest.

### ***Response to Arguments***

Applicant's arguments with respect to claim 1-30 have been considered but are moot in view of the new ground(s) of rejection. With respect to Andresen [433] and Drew [061], applicant has not provided any arguments to these references.



***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Quash whose telephone number is (571)-272-2480. The examiner can normally be reached on Monday thru Friday 9 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee can be reached on (571)-272-2477. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

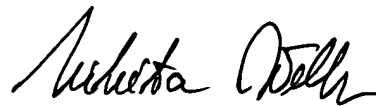
Art Unit: 2881

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A. Quash



8/23/04



NIKITA WELLS  
PRIMARY EXAMINER

08/23/04